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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,595	06/27/2000	Paul A. Underbrink	ST97001CI2 (209-US-CIP2)	5340
34408	7590	06/01/2005	EXAMINER	
THE ECLIPSE GROUP 10453 RAINTREE LANE NORTHRIDGE, CA 91326			ODOM, CURTIS B	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/604,595

Applicant(s)

UNDERBRINK ET AL.

Examiner

Curtis B. Odom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21, 22, 25, 26, 33 and 34 is/are allowed.
- 6) ☒ Claim(s) 1, 6, 11-16, 23, 24, 27-32, 35 and 36 is/are rejected.
- 7) ☒ Claim(s) 2-5, 7-10 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/1/2004 have been fully considered but they are not persuasive. Claims 11-15 and 29-32 are still directed to non-statutory subject matter. The claims are directed toward a computer data signal embodied in a carrier wave which is simply a signal. Even though the signal may be employed to conform a device such as a computer processor to perform multiple functions, it is the processing device, not the computer data signal, which performs the functions. The signal falls into the category of Nonfunctional Descriptive Material. See for example MPEP § 2106 IV.B.1. (b) which states that

The policy that precludes the patenting of nonfunctional descriptive material would be easily frustrated if the same descriptive material could be patented when claimed as an article of manufacture. For example, music is commonly sold to consumers in the format of a compact disc. In such cases, the known compact disc acts as nothing more than a carrier for nonfunctional descriptive material. The purely nonfunctional descriptive material cannot alone provide the practical application for the manufacture.

The signal is functionally equivalent to the compact disc in that it is nothing more than a carrier for nonfunctional descriptive material (1's and 0's). The nonfunctional material, or the signal for that fact, cannot alone provide the practical application for the manufacture. Without a communications device, the signal is nonfunctional, it does not produce or manufacture anything. Thus, a claim directed toward a signal is deemed non-statutory subject matter.

Regarding claims 23, 24, 27, 38, 31, 32, 35, and 36, it is still the understanding of the examiner that the specification does not disclose a fourth multiplier or means for obtaining a fourth product coupled to a first switch for selecting one of the in-phase portion and the

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quadrature-phase portion and a second switch coupled to the first switch for selecting one of the even samples and the odd samples (see Fig. 9 and page 18, line 11-page 19, line 9 of the specification).

Regarding claim 1, the examiner disagrees that the Lee patent (U. S. Patent No. 5, 267, 260) fails to teach or describe all of Applicants claim limitations in independent claim 1. Claim 1 recites "a switch for selecting one of the in-phase portion and the quadrature-phase portion; and a first multiplier coupled to the switch for multiplying the selected portion of the plurality of signal samples with one of the plurality of PN code chips to obtain a first product". Even though Lee discloses the selection of one of the in-phase and quadrature portion of the signal takes place after integration, there is no specific recitation in the Applicants' claim as to when this selection takes place. Thus, since Lee discloses selecting one of the in-phase portion and the quadrature-phase portion of a signal, Lee successfully discloses this limitation of claim 1.

The applicant also states that Lee does not teach multiplying only the selected portion of a spread spectrum signal, nor does it teach obtaining a first product, it merely does a comparison in a comparator. However, Lee discloses the output value of the quadrature or in-phase channel is selected, and the selected output value is multiplexed with a PN code in a despreading demodulator, and the originally transmitted signal is restored based on the result of the multiplexing (column 4, lines 27-37). It would have been obvious to one skilled in the art at the time the invention was made that in order to despread a spread spectrum signal, the signal is multiplied (multiplexed) with a spreading (PN) code to obtain a despread signal. Therefore, the "first product" as recited in the Applicants' claim is the "originally transmitted (despread) signal" as disclosed by Lee. Thus, Lee also discloses this limitation of claim 1.

With regards to claim 16, it is also the understanding of the examiner that the Langberg et al. (U. S. Patent No. 5, 852,630) reference is used under 35 U.S.C. 103(a) simply to show prior art disclosing the implementation of hardware into software. It is not used to show how one would implement hardware into software. The applicant also states that it is well known that “any hardware process can be transformed into an equivalent software process”. The Langberg et al. patent is referenced under 35 U.S.C. 103(a) to simply provide evidence for this statement.

The applicant also states that “there is an additional requirement when determining whether the combined references teach or suggest all the claim limitations that any software-based embodiments have the same structure, i.e., the algorithms used to perform the function in question must be the same”. However, the applicant does not disclose any algorithms with regards to the present application. The applicant has recited a software-base embodiment in the claims, however, the applicant has not disclosed a computer program reciting all the algorithms used to perform the functions as recited in the claims in order to meet the requirement that the software-based embodiments have the same “structure” as the hardware embodiment.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 11-15 and 29-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 11-15 and 29-36 are directed to non-statutory

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subject matter. The claims are directed toward a computer data signal embodied in a carrier wave which is simply a signal. Even though the signal may be employed to conform a device such as a computer processor to perform multiple functions, it is the processing device, not the computer data signal, which performs the functions. The signal falls into the category of Nonfunctional Descriptive Material. See for example MPEP § 2106 IV.B.1. (b) which states that

The policy that precludes the patenting of nonfunctional descriptive material would be easily frustrated if the same descriptive material could be patented when claimed as an article of manufacture. For example, music is commonly sold to consumers in the format of a compact disc. In such cases, the known compact disc acts as nothing more than a carrier for nonfunctional descriptive material. The purely nonfunctional descriptive material cannot alone provide the practical application for the manufacture.

The signal is functionally equivalent to the compact disc in that it is nothing more than a carrier for nonfunctional descriptive material (1's and 0's). The nonfunctional material, or the signal for that fact, cannot alone provide the practical application for the manufacture. Without a communications device, the signal is nonfunctional, it does not produce or manufacture anything. Thus, a claim directed toward a signal is deemed non-statutory subject matter.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 11-15, 23, 24, 29-32, 35, and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter

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which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 11-15 and 29-32 recite the claim limitations “a receiving source code segment comprising means for” and “a processing source code segment comprising means for”.

However, it is the understanding of the examiner that a source code segment performs a function, but does not comprise of the means/apparatus for performing the function. A “means for” plus function is equivalent to an apparatus/structure. The source code segment does not comprise of an apparatus/structure.

Claims 23, 24, 27, 38, 31, 32, 35, and 36 recite the limitation “a fourth multiplier”, or “multiplying...to obtain a fourth product”, or “means for multiplying...to obtain a fourth product”. However, the specification does not disclose a fourth multiplier or means for obtaining a fourth product coupled to a first switch for selecting one of the in-phase portion and the quadrature-phase portion and a second switch coupled to the first switch for selecting one of the even samples and the odd samples (see Fig. 9 and page 18, line 11-page 19, line 9 of the specification).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee (previously cited in Office Action 6/9/2004).

Regarding claim 1, Lee discloses a system for despreading (column 4, lines 26-37) a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal samples (Fig. 2, blocks 33 and 34, column 3, lines 19-43, wherein it is well known that an A/D converter creates signal samples from a received signal), each signal sample having an in phase and quadrature-phase portion, and wherein the PN code comprises a plurality of chips (wherein it is known that PN codes comprise of chips), the system comprising:

a switch (Fig. 2, block 3, column 4, lines 26-37) for selecting one of the in-phase portion and the quadrature-phase portion; and

a first multiplier (Fig. 2, block 39, column 4, lines 26-37) coupled to the switch for multiplying the selected portion of the plurality of signal samples with one of the plurality of PN code chips to obtain a first product.

Regarding claim 6, the claimed method includes features corresponding to the above rejection of claim 1, which is applicable hereto.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (previously cited in Office Action 6/9/2004) in view of Langberg et al. (previously cited in Office Action 6/9/2004).

Regarding claim 16, Lee discloses all of the subject matter as described in the previous rejection (see rejection of claim 1, except for the method written as a computer program product with a computer readable storage medium).

However, Langberg et al. teaches that the method and apparatus for a transceiver warm start activation procedure with precoding can be implemented in software stored in a computer-readable medium. The computer readable medium is an electronic, magnetic, optical, or other physical device or means that can contain or store a computer program for use by or in connection with a computer-related system or method (note column 3, lines 51-65). One skilled in the art at the time the invention was made would have clearly recognized that the method of Lee would have been implemented into software. The implemented software would perform the same function of the hardware for less expense, greater adaptability, and greater flexibility. Therefore, it would have been obvious to have implemented the method as taught by Lee into software in the same manner as taught by Langberg et al. (with regards to the computer readable medium) in order to reduce cost and improve the adaptability and flexibility of the communication system.

Allowable Subject Matter

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10. Claims 21, 22, 25, 26, 33 and 34 allowable over prior art references because related references do not disclose selecting one of the in-phase or quadrature phase portions of a signal, selecting one the even or odd sample of the signal, and multiplying the selected portion of the selected sample with a PN code.

11. Claims 2-5, 7-10, and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Curtis Odom
May 23, 2005



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